

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

### Listing of Claims

1. - 6. (cancelled)

7. (currently amended) A process for manufacturing a metal nanotube comprising:

a step for providing a film having a penetrated hole;

a step for forming a cathode having a thickness of 10 to 80 nm and a pinhole on one surface of the film , wherein the pinhole is formed on the penetrated hole, and the cathode is exposed on the bottom of the penetrated hole;

a step for contacting the surface of the cathode with a container disposed over and blocking the bottom of the penetrated hole;

a step for filling an electrolyte solution containing metal ions between the cathode and an anode;

a step for applying a voltage to the electrolyte solution to electrochemically precipitate a metal on the inner surface of the penetrated hole and generate gas in the pinhole and the penetrated hole; and

a step for immersing the film in a solvent to remove the film , to give a metal nanotube.

8. (previously presented) The process for manufacturing a metal nanotube of Claim 7, wherein said cathode comprises gold, copper, a gold based alloy, a copper based alloy or a platinum-palladium alloy.

9. (previously presented) The process for manufacturing a metal nanotube of Claim 7, wherein the shape of said metal nanotube is controlled by adjusting at least one condition selected from the pH of said electrolyte solution and the applied voltage in said electrolysis.

10. (original) The process for manufacturing a metal nanotube of Claim 9, wherein the pH of said electrolyte solution containing metal is 0 to 5.5 and the applied voltage in said electrolysis is  $-0.5$  to  $-1.5$  V.

11. (new) The process for manufacturing a metal nanotube of Claim 7, wherein said container includes a current collector in contact with the cathode over the bottom of the penetrated hole.